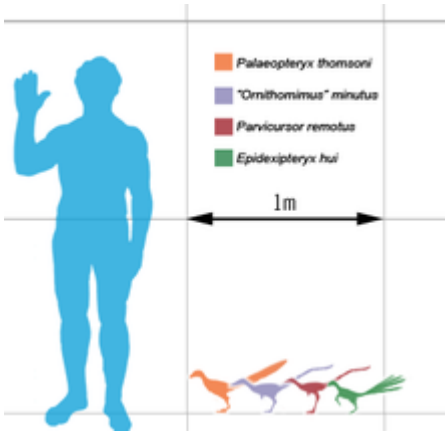
Palaeopteryx

Palaeopteryx (meaning "ancient wing") is a genus of theropod dinosaur now considered a *nomen dubium*. It was named and misidentified by J. A. Jensen in 1981, then redescribed by Jensen and K. Padian in 1989. At that time the binomial *Palaeopteryx thomsoni* was deemed invalid by Jensen. The only referred specimen is a single bone fragment (BYU 2022).



Size of *P. thomsoni* (orange) compared to other small theropods

Palaeopteryx (BYU 2022) has been the subject of much confusion on the internet, in the popular scientific press, and among creationist writers. It has been described as a possible bird older than *Archaeopteryx*, but it cannot be clearly assigned to Avialae, and its horizon is younger than that of *Archaeopteryx*, though it is still from the Jurassic.

Palaeopteryx	
Temporal range: Late Jurassic, 153 Ma	
Pre€ € O S D C P T J K PgN	
Scientific classification	
Kingdom:	Animalia
Phylum:	Chordata
Clade:	Dinosauria
Clade:	Saurischia
Clade:	Theropoda
Clade:	Paraves
Genus:	†*Palaeopteryx* Jensen, 1981
Species:	†***P. thomsoni***
Binomial name	
†***Palaeopteryx thomsoni*** Jensen, 1981	

BYU 2022 is about 45 millimetres ($1\frac{3}{4}$ in) long. It was described by Jensen in 1981 as an "avian – like" proximal left tibiotarsus. It was then listed by R. E. Molnar in 1985 in a survey of the earliest known birds. Jensen and Padian reidentified it as the distal right radius of "a small deinonychosaur or bird" in 1989.

BYU 2022 was collected in the 1970s by paleontological expeditions from Brigham Young University directed by J. A. Jensen. It was found in Late Jurassic deposits in the "Dry Mesa" quarry on the Uncompahgre Upwarp in western Colorado (Brushy Basin Member, Morrison Formation). It was found among mixed fossil remains that included pterosaur and dinosaur material. One notable specimen found with it is the right femur of a derived maniraptoran theropod (BYU 2023). BYU 2023 is missing the distal end and is about 63 millimetres ($2\frac{1}{2}$ in) long. It is probably too small to be from the same individual as BYU 2022. BYU 2023 shows apomorphies known only in advanced maniraptorans, including *Microvenator*, *Microraptor*, and *Archaeopteryx*.

BYU 2022 and 2023 are important because they are samples of small – bodied maniraptorans from Jurassic North America.

References

1. Jensen, James A. (1981b). Another look at Archaeopteryx as the world's oldest bird. The Journal of the Utah Academy of Sciences: *Encyclia*, **58**:109 – 128.

2. Jensen, James A. & Padian, Kevin. (1989). Small pterosaurs and dinosaurs from the Uncompahgre fauna (Brushy Basin member, Morrison Formation: ?Tithonian), Late Jurassic, western Colorado. *Journal of Paleontology* Vol. **63** no. 3 pg. 364 – 373.
